

FIG. 1

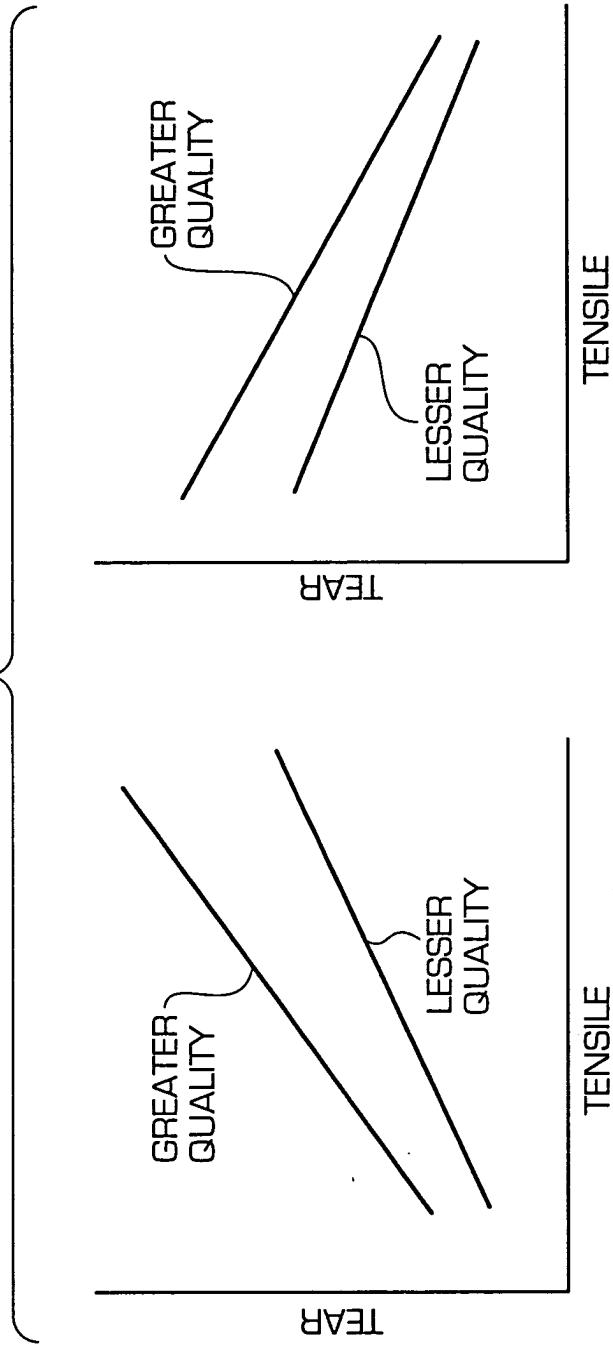
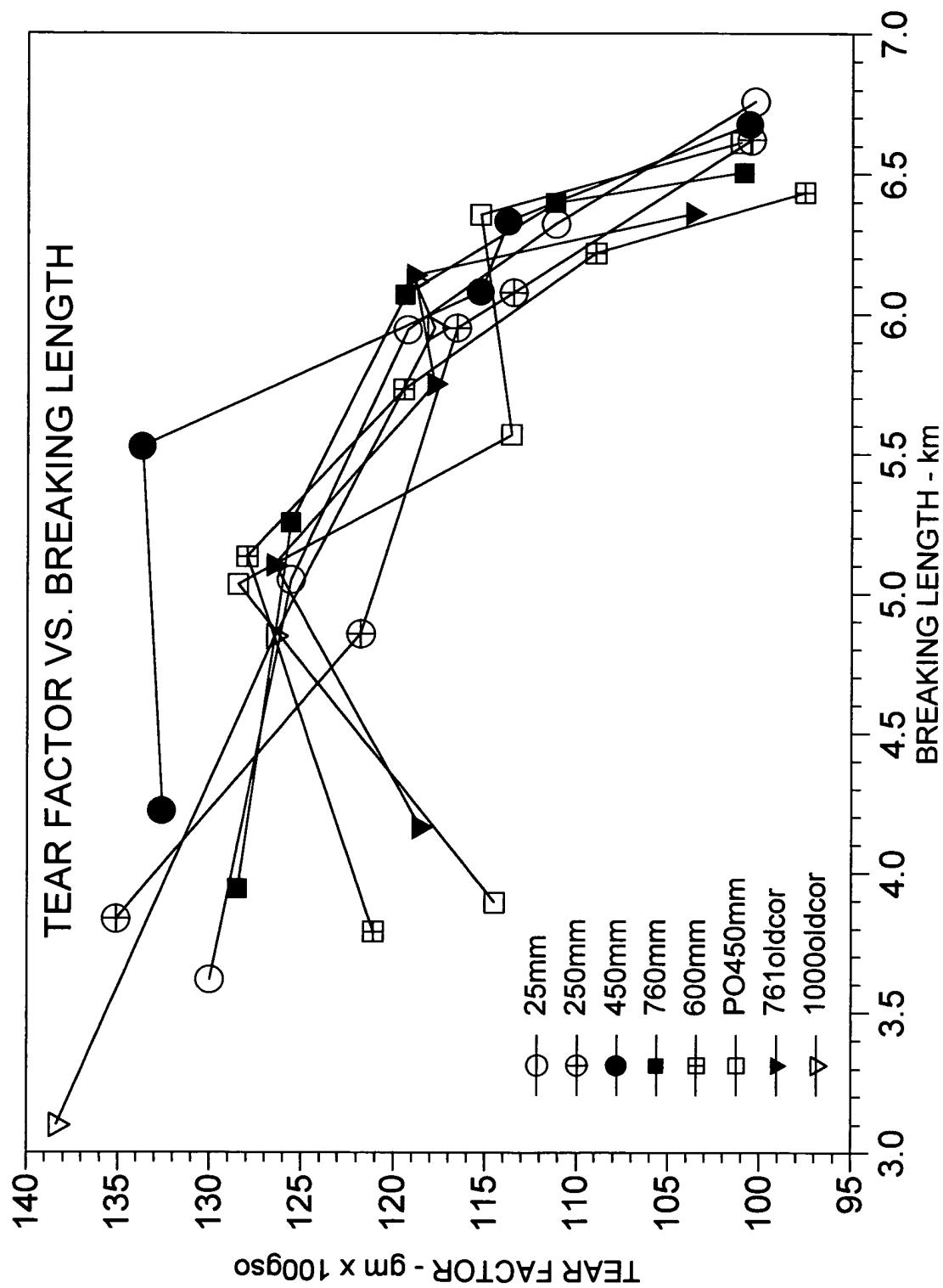


FIG. 2



Fluid Exchange Process Diagram

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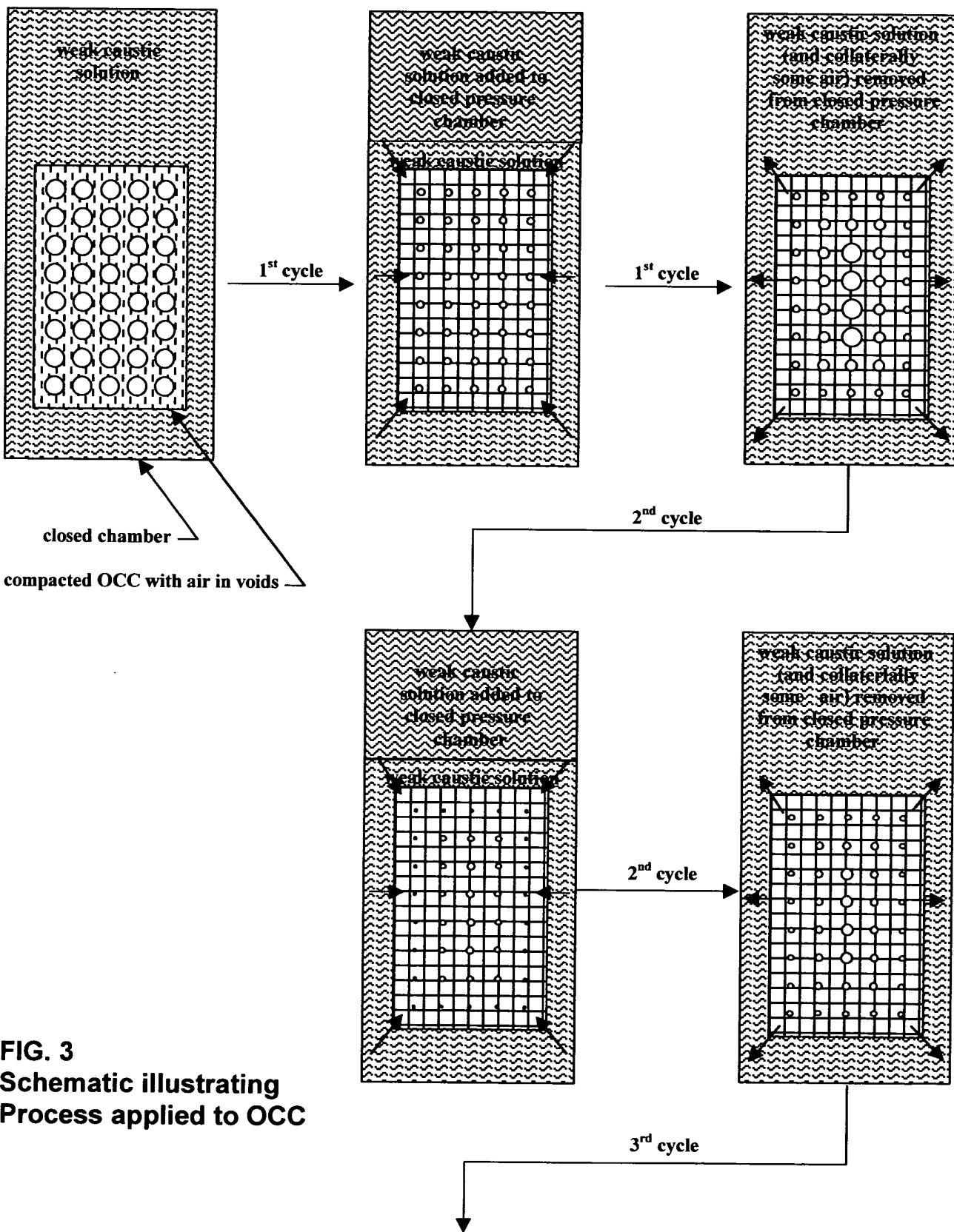
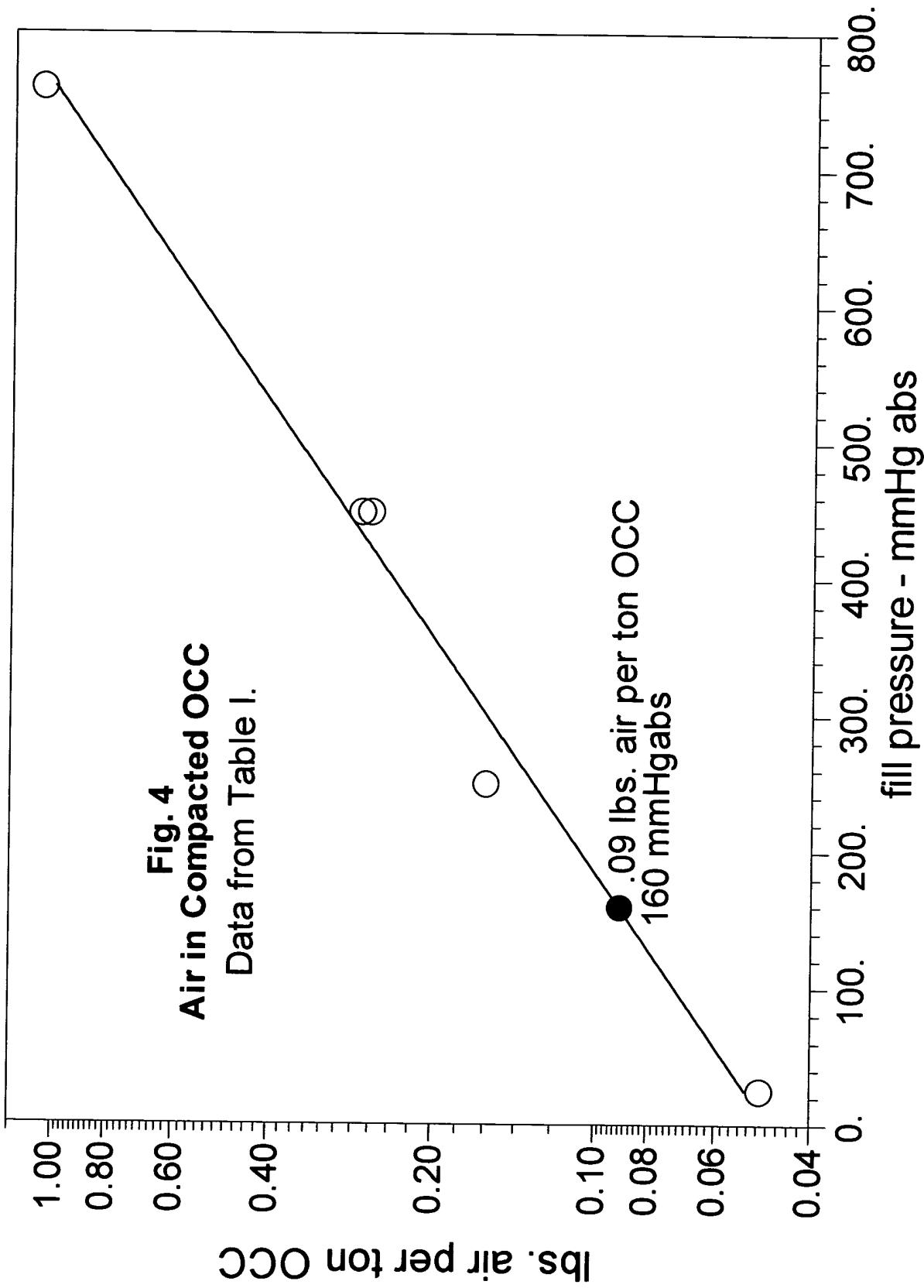


FIG. 3
Schematic illustrating
Process applied to OCC

Fig. 4
Air in Compacted OCC
Data from Table I.



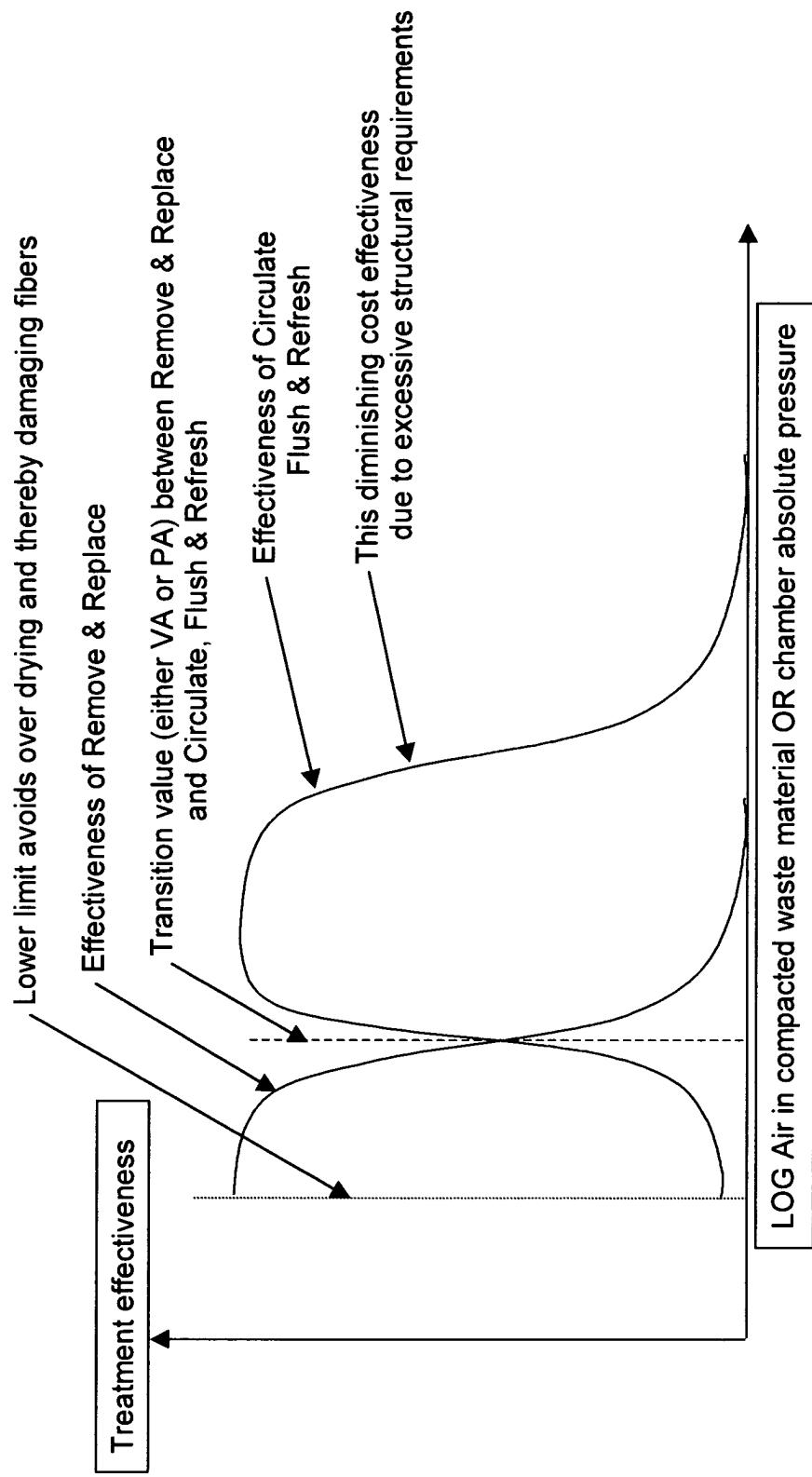


Fig. 5
Domains of Effectiveness of Prior “Remove & Replace” Inventions and of New “Circulate, Flush & Refresh” Invention

Table I.
Air in Compacted OCC

		Equations for sample data point C in column C					
1	Air weight calculations utilizing 400 gram sample of OCC						
2	3 Cross-sectional Area Of Laboratory Closed Pressure Chamber - square mm	4744	C17	\$C3*C15			
4	Hg. Density	13.6	C18	C17			
5	Cubic mm/cubic feet	28316847	C19	C17*(C13+C16/\$C4)/(C14-C13-			
6	Grams/pound	453.6	C20	C15/\$C4)			
7	Pounds/ton	2000	C21	C18+C19			
8	Air std. atm. spec vol. - cubic feet/pound	13.08	C22	(C14+((C16-			
9	Air std. atm. pressure - mm Hg.			C15)*\$C4)))/(\$C9*\$C8)			
10	Air std. atm. pressure - mm Hg.	760	C25	(C13+C16/\$C4))(\$C9*			
11	Data points			*\$C8)			
12				((C22*C20/\$C5)/(400/\$C6))*\$C7			
13	p1 = Fill pressure - mm HG abs	250	C				
14	p2 = pressure after addition of air to top of closed pressure chamber - mm Hg abs	5936	D	25	760.4	450	450
15	Drop in free surface of weak caustic solution after air addition	767.4	E	5936	5936	772	772
16	Height difference - mm	15	F	30	31	14	6
17	Distance from free surface @ p1 to center of compacted OCC - mm	215	G	215	215	215	215
18	Weak caustic solution volume forced into compacted OCC by air addition - cubic mm	71160		142320	147064	66416	28464
19	V1-V2 = Decrease in volume of air in compacted OCC caused by air addition - cubic mm	71160		142320	147064	66416	28464
20	V2 = Compacted volume @ p2 + (compacted distance down to V2)/13.6 - cubic mm	3327		7846	22066	5640	41233
21	V1 = Initial volume @ p1 + (initial distance down to V1)/13.6 - cubic mm	74487		150166	169130	72056	69697
22	Compacted density in V2 - lbs/cubic foot	0.59861		0.07857	0.59850	0.59862	0.07921
23	Initial density in V1 - lbs/cubic foot	0.02674		0.00411	0.07808	0.04686	0.04686
24	Fill pressure - mm HG	250		25	760.4	450	450
25	Air in Compacted OCC - lbs. air per ton OCC	0.15952		0.04937	1.05773	0.27043	0.26158